

REMARKS

Claims pending in the present patent application are numbered 4, 8, 9 and 14-20. Claims 4, 8, 9, 14 and 15 are amended herein. Claims 1-3, 5-7 and 10-13 are canceled herein without prejudice. Claims 19 and 20 are new. The specification is amended herein. No new matter has been introduced as a result of the amendments in this response. The rejections set forth in the Office Action dated September 22nd, 2005, have been carefully considered by the Applicants. Applicants respectfully assert that the pending Claims are in condition for allowance.

RESPONSES TO CLAIM REJECTIONS

102 Rejections

Claims 4, 5, 7-10 and 12-18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Van Antwerp (U.S. Patent No. 5,015,836, hereinafter "Van Antwerp"). Claims 5, 7, 10, 12 and 13 are canceled herein without prejudice.

Van Antwerp presents an optical encoding system that "utilizes a compensation feedback signal for compensating for effects of time and temperature on the photoemission characteristics of the encoder's light source" (abstract). Van Antwerp teaches that "... with the passage of time and/or variations in temperature, the photoemission characteristics of the LED **102** change. Thus, the amount of light **116** emitted by the LED **102** and therefore the total light **128**, **129** received by the photodiodes **104**, **105** also changes...these changes are detected and compensated by the present invention..." (col. 6, lines 32-39)

Van Antwerp teaches one photodiode array (**104** and **105**) for performing both the duties of encoding and those of calibration. The system described by Van Antwerp measures the constant combined current generated by the photodiode array (col. 5, lines 23-34). If the current sum **121** is too high, the current **122** to the light source is decreased (col. 6, line 64 – col. 7, line 5). Conversely, if the current sum **121** is too low, the current **122** to the light source is increased (col. 7, lines 6-24). Van Antwerp also discusses a prior art optical encoding system (Figure 1, col. 1-4) having a calibration area on a code strip and a calibration photodiode.

However, Claim 4 recites:

An optical encoding system comprising:
a photo-emitter;
a code strip comprising:
 a calibration area for generating a calibration signal, wherein said calibration area comprises a degree of transparency, wherein said transparency decreases as contaminants collect on said code strip;
 an indexing area for generating an indexing signal; and
 an encoding area for generating an encoding signal;
a detector comprising:
 a calibration photodiode for converting the light from the calibration area into an electrical calibration signal, wherein said calibration signal is used to determine said degree of transparency of said calibration area;
 an indexing photodiode for converting light from said indexing area into an electrical indexing signal; and
 an encoding photodiode for converting light from said encoding area into an electrical encoding signal; and
a circuit coupled with said detector and said photo-emitter, wherein if said degree of transparency of said calibration area is insufficient, said circuit increases a current to said photo-emitter to compensate for said insufficient transparency.

Van Antwerp teaches modulating current to the light source **102** to compensate for the effects of time and temperature on the light source **102**. In contrast, Claim 4 recites increasing current to a photo-emitter to compensate for decreased transparency of a code strip due to contaminants being deposited on the code strip over time.

Additionally, Van Antwerp fails to teach or suggest an indexing area on the code strip and an indexing photodiode, as recited in Claim 4. Claims 8, 9 and 14 are dependent on Claim 4 and recite additional limitations. Applicants respectfully submit that the rejection of Claims 4, 8, 9 and 14 under 35 U.S.C. 102 (b) as being anticipated by Van Antwerp is traversed. Applicants respectfully assert that Claims 4, 8, 9 and 14 are now in condition for allowance.

Claim 15 recites a method of optical encoding that includes increasing a current to a light source if transparency of a code strip is insufficient due to the deposition of contaminants on the code strip. The code strip recited in the method of Claim 15 includes an indexing area. Van Antwerp fails to teach or suggest increasing a current to a light source to compensate for decreased transparency of a code strip or an indexing area as recited in Claim 15. Claims 16-18 depend on Claim 15 and recite further limitations. Applicants respectfully submit that the rejection of Claims 15-18 under 35 U.S.C. 102 (b) as being anticipated by Van Antwerp is traversed, and that Claims 15-18 are now in condition for allowance.

103 Rejections

Claims 1-3, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Antwerp in view of Stridsberg (US Patent No. 5, 998,783) Claims 1-3, 6 and 11 are canceled herein without prejudice.

CONCLUSION

In light of the response presented herein, Applicants respectfully assert that Claims 4, 8, 9 and 14-20 overcome the rejections of record, and therefore earnestly solicit allowance of these claims.

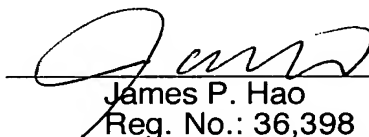
The Examiner is invited to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

Wagner, Murabito & Hao LLP

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James P. Hao
Reg. No.: 36,398
Two North Market Street
Third Floor
San Jose, California 95113